Reference Tables

November, 1947

CANADIAN PULP AND PAPER ASSOCIATION
SUN LIFE BUILDING, MONTREAL, P.Q.

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Introduction

These tables present a succinct picture of pulp and paper operations, their intimate relationship with the forest resources and the forest crop, and something, too, of the importance of the industry in the economy of Canada.

While the material herein is clearly set forth in the index, it should be noted that Section "B" gives a bird's-eye view of the operations of the industry from its pulpwood harvest to its markets; and that in Section "F" may be found, not only the figures revealing the national significance of the industry, but also general statistics covering its operations as a whole.

The publication of these tables has largely been made possible through the kindly aid of L. J. Pouliot, chief of Forest Products Branch of the Dominion Bureau of Statistics; and to him grateful acknowledgment is made.

Montreal
November 20
1947

INDEX

"A" Forests and Pulpwood

Table

1. Forest extent
2. Forests holdings
3. Forest volume
4. Coniferous stands
5. Forest consumption
6. Forest increment
7. Wood used by mills
8. Species used
9. Pulpwood production, cords
10. Pulpwood production, value
11. Cords, cubic feet and board measure

"B" 1946 Figures

12. Pulpwood production
13. Pulp supply
14. Total production
15. Markets
16. Pulp use and sale
17. Paper production
18. Pulp and paper exports

"C" Pulp Statistics

19. Pulp production and exports
20. Chemical pulp production and exports
21. Chemical pulp exports
22. Bleached sulphite pulp
23. Unbleached sulphite pulp
24. Sulphate pulp
25. Mechanical pulp
26. Screenings — chemical
27. Screenings — mechanical
28. Mechanical pulp utilization
29. Bleached sulphite pulp utilization
30. Unbleached sulphite pulp utilization
31. Sulphate pulp utilization
32. Destination of pulp exports
33. Average value, U.S. imports
34. Canadian pulp in U.S. market
35. World pulp figures

"D" Newsprint

Table

36. Production and exports
37. Sources of U.S. imports
38. U.S. supplies
39. Prices
40. Advertising lineage
41. World production
42. Consumption by newspapers
43. Operating ratio

"E" Other Paper and Paperboard

44. Production, tons
45. Production, value
46. Exports, tons
47. Exports, value

"F" National Significance

48. Paper, production and export
49. Exports and Canadian trade
50. Production and national income
51. Growth of industry
52. Operations of mills
53. Mill locations
54. Employees and wages
55. Capital, employees, and wages
56. Wages paid and numbers employed
57. Growth in employment and wages
58. Domestic trade
59. Expenditures
60. Purchases
61. Purchases of mill supplies
62. Fuel purchased
63. Electricity purchased
64. Industry car loadings
65. Payrolls and weekly earnings
66. Power utilization
67. Canadian exports
68. Pulp and paper and mining

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"A" — FORESTS AND PULPWOOD

Table 1.

Forest Extent

	Square Miles
Forested Areas of Canada:	1,290,960
All of which, save for 123,000 square miles, lies within the provinces.	
Forested Areas Classed as Unproductive:	477,850
Small trees in adverse locations not expected to reach merchantable size.	
Productive Forest Areas:	813,110
Capable of producing continuous crops of timber.	
Productive Forest Not Presently Accessible:	378,110
Accessible Productive Forests:	435,000
One half of this area bears trees large enough for use; the remainder is younger growth.	
Privately Owned Forests:	100,175
Farm wood lots 34,792	
Others 65,383	
100,175	
Accessible Productive Forest Owned by the Crown: . .	334,825
Cutting Rights Leased by the Crown:	165,350
Pulp and paper licences 129,189	
Saw timber licences 21,980	
Timber sales 13,226	
Permit berths 955	
165,350	
Unoccupied Accessible Productive Forest Owned by the Crown:	169,475
(Reserves and parks form part of the Accessible Productive Forests. Restricted cutting is permitted in some of these areas.)	

Source: Dominion Forest Service.

Table 2.

Forest Holdings

In accessible Productive Forests

	Sq. Miles	Per Cent
Private holdings	100,175	23.
Crown Lands		
Leased by pulp and paper cos. . . .	129,189	30.
Leased by others	36,161	8.
Unoccupied	169,475	39.
Accessible Productive Forests	435,000	100.

Source: Dominion Forest Service.

Table 3.

Forest Volume

In 000,000's of cubic feet of merchantable timber in the Productive Forest Areas

Accessible Forests:	
Conifers	132,712
Broad leaved	58,635
Presently Inaccessible Forests:	
Conifers	107,531
Broad leaved	12,323

Source: Dominion Forest Service.

Table 4.

Coniferous Stands

Estimated Stands of Accessible Conifers by Provinces

	Millions of cubic feet	Pulp Production Tons — 1946
Prince Edward Island	61	nil
Nova Scotia	2,939	*
New Brunswick	5,450	*
Quebec	46,755	3,460,853
Ontario	31,784	1,837,975
Manitoba	991	*
Saskatchewan	1,128	nil
Alberta	7,724	nil
British Columbia	35,880	520,779
N.S., N.B. and Manitoba . . .	.....	795,803
	132,712	6,615,410

* Figures for N.S., N.B. and Manitoba are not compiled separately.

Source: Dominion Forest Service and Dominion Bureau of Statistics.

Table 5.

Forest Consumption

Average Annual Depletion 1935-1944

	000's of cu. ft.	%	%
Logs and bolts	896,412	27.8	37.7
Pulpwood for domestic use	545,053	16.9	22.9
Pulpwood for export	134,111	4.2	5.7
Firewood	715,071	22.1	30.0
Ties, poles, pit-props, post, rails . . .	59,781	1.8	2.5
Miscellaneous	29,536	.9	1.2
	2,379,964		100.0
Fire 347,592			
Insects and disease 500,000	847,592	26.3	
	3,227,556	100.0	

Source: Dominion Forest Service.

Table 6.

Forest Increment

Complete estimates of the rate of growth of Canadian forests have not been compiled, but the following facts are known:

	Cubic feet per acre
While there is but a small growth in many areas, over considerable tracts growths have been recorded by the Dominion Forest Service of:	25—40
Managed forests in Scandinavia produce:	28
Replacement of annual depletion in the accessible productive forest areas requires an annual average growth of:	11

The foregoing figures by no means indicate that there is no cause for anxiety regarding the future maintenance of the forests and their proper conservation for use.

Other factors affecting these figures include:

1. While the annual increment appears to exceed the annual depletion, no comprehensive and proper estimate of forest increment in Canada as a whole has yet been prepared, or is under way.
2. Insects and diseases in the forests periodically reach epidemic proportions; unless checked they will affect the existing balance between depletion and increment.
3. In many instances the depletion is concentrated in the more accessible areas. Growth that accrues in more remote areas is not used.
4. Repeated fires retard and often make impossible the proper regeneration of the forests.
5. Land tenures are often such that there is no economic or other urge upon some loggers to operate along scientific methods.
6. The fire hazard is greater in the more accessible forests, a situation naturally having a bearing on the cutting methods pursued by owners or operators.

Source: Dominion Forest Service.

Table 7.

Wood Used by Mills

	Per Cent
From farmers and other small holdings	20
Other purchases, including sawmill waste	10
Total purchased	30
Cut from owned or leased limits	70
	100

Source: Estimate by Pulpwood Committee, Canadian Pulp and Paper Association.

Table 8.

Species of Wood Used by Pulp and Paper Mills — 1946

	Cords	Per Cent
Pulpwood:		
Spruce and Balsam	7,564,931	86.1
Jack Pine	445,275	5.1
Hemlock	379,487	4.3
Poplar	208,115	2.4
Other Kinds (x)	86,948	1.0
	8,684,756	98.9
Other Wood (xx)	95,171	1.1
	8,779,927	100.0

(x) — Includes cedar, douglas fir, larch, birch and other hardwoods, and boomsticks.

(xx) — Includes sawmill chips, slabs and edgings, sawdust, and butt cores.

Source: Dominion Bureau of Statistics.

Table 9.

Pulpwood Production — Cords

Cords	Apparent Production	Consumption	Exports	Imports
1920	4,024,826	2,777,422	1,247,404	
1921	3,273,131	2,180,578	1,092,553	
1922	3,923,940	2,912,608	1,011,332	
1923	4,654,663	3,270,433	1,384,230	
1924	4,647,201	3,316,951	1,330,250	
1925	5,092,461	3,668,959	1,423,502	
1926	5,621,305	4,229,567	1,391,738	
1927	5,929,456	4,387,687	1,541,769	
1928	6,295,912	4,796,320	1,532,266	32,674
1929	6,536,335	5,278,422	1,294,995	37,082
1930	5,977,183	4,741,349	1,330,466	94,632
1931	5,199,914	4,148,279	1,123,330	71,695
1932	4,222,224	3,647,754	620,124	45,654
1933	4,746,383	4,044,876	718,556	17,049
1934	5,773,970	4,766,604	1,021,285	13,919
1935	6,095,016	5,005,083	1,109,873	19,940
1936	7,002,057	5,775,894	1,235,754	9,591
1937	8,298,165	6,613,639	1,705,031	20,505
1938	6,438,344	4,719,753	1,752,259	33,668
1939	6,899,986	5,386,240	1,539,440	25,694
1940	8,499,922	6,996,119	1,551,429	47,626
1941	9,544,699	7,688,388	1,856,392	81
1942	9,653,574	7,667,438	1,987,850	1,714
1943	8,801,368	7,263,155	1,540,592	2,379
1944	8,668,566	7,177,639	1,499,136	8,209
1945	9,145,673	7,478,508	1,671,298	4,133
1946	10,523,256	8,684,756	1,855,381	16,881

Note: Prior to 1946 "Apparent Production" and "Consumption" figures include small quantities of sawmill chips, slabs and edgings, sawdust, and butt cores.

Apparent production estimated on the basis of consumption plus exports minus imports.

Imports not reported prior to 1928.

All quantities are given in terms of rough or unpeeled wood.

Source: Dominion Bureau of Statistics.

Table 10.

Pulpwood Production — Value

Value	Apparent Production	Consumption	Exports	Imports
1920	$61,183,060	$45,404,889	$15,778,171	
1921	52,900,872	38,283,262	14,617,610	
1922	50,735,361	40,375,599	10,359,762	
1923	57,119,596	43,594,592	13,525,004	
1924	57,777,640	44,241,582	13,536,058	
1925	62,181,537	48,012,602	14,168,935	
1926	68,262,873	54,195,843	14,067,030	
1927	70,284,895	54,582,190	15,702,705	
1928	74,587,833	59,578,417	15,269,660	$260,244
1929	76,120,063	63,101,138	13,314,738	295,813
1930	67,529,612	54,788,730	13,611,617	870,735
1931	51,973,243	43,120,740	9,359,592	507,089
1932	36,750,910	32,192,066	4,830,506	271,662
1933	33,213,973	28,609,247	4,696,459	91,733
1934	38,302,807	31,675,325	6,680,307	52,825
1935	41,195,871	34,265,329	7,041,052	110,510
1936	48,680,200	40,455,656	8,276,423	51,879
1937	63,057,205	51,081,661	12,088,329	112,785
1938	53,761,999	40,326,689	13,641,798	206,488
1939	58,302,668	46,558,645	11,901,480	157,457
1940	74,347,132	62,230,155	12,521,880	404,903
1941	88,193,045	72,264,544	15,928,826	325
1942	103,619,151	83,318,870	20,314,253	13,972
1943	110,844,790	92,308,272	18,565,265	28,747
1944	124,363,926	104,477,689	20,012,285	126,048
1945	146,172,701	122,347,847	23,881,928	57,074
1946	183,085,359	154,581,001	28,731,150	226,792

Apparent production estimated on the basis of consumption plus exports minus imports.

Imports not reported prior to 1928.

All quantities are given in terms of rough or unpeeled wood.

Source: Dominion Bureau of Statistics.

Table 11.

Cords, Cubic Feet, and Board Measure

A standard cord is a stack of wood 4 x 4 x 8 feet containing 128 cubic feet of wood, bark, and interstices. A cord usually contains about 85 cubic feet of solid wood, but the content varies with the size of the logs.

In the lumber industry, wood is often measured by the board foot. A board foot is the equivalent of a board one inch in thickness and one square foot in surface area. The relationship between board measure and cord measure varies in different sections of the Dominion. Usually, 2 cords are considered to be equivalent to about 1000 feet board measure. But this ratio also varies with the size and type of the wood.

Source: Dominion Forest Service.

"B" — 1946 FIGURES

Table 12.
Pulpwood Production 1946

	Cords	Value
Apparent pulpwood production	10,523,256	$183,085,359
Pulpwood imports	16,881	226,792
Total supply	10,540,137	$183,312,151
Less pulpwood exports	1,855,381	28,731,150
Pulpwood used in Canadian mills	8,684,756	$154,581,001

Source: Dominion Bureau of Statistics.

Table 13.
Pulp Supply 1946

The pulpwood used in the mills together with other pulps resulted in the following supply:

	Tons	Value
Groundwood pulp*	4,122,046	$113,599,526
Chemical pulp**	2,493,364	174,024,701
Total wood pulp production	6,615,410	$287,624,227
Wood pulp imports	14,471	1,290,956
Other wood fibre used	152	1,380
Other fibres and stock used***	331,157	8,636,115
Total supply	6,961,190	$297,552,678

* Includes screenings, off-quality, defibrated, and exploded pulp.
** Includes screenings.
*** Includes rags, straw, and wastepaper.

Source: Dominion Bureau of Statistics.

Table 14.
Total Production 1946

From the foregoing supply of pulps flowed the industry's production for sale as follows:

Pulp Exported	Tons	Value
Mechanical	268,290	$ 12,571,257
Bleached sulphite	460,503	47,013,382
Unbleached sulphite	446,209	35,120,122
Sulphate	204,769	16,998,605
Other wood pulp	19,667	1,763,821
Chemical pulp screenings	11,326	390,881
Mechanical pulp screenings	7,794	162,591
	1,418,558	$114,020,659
Pulp for Domestic Sale	274,885a	16,837,867b
Pulp Production For Sale	1,693,443	$130,858,526
Paper Production		
For domestic market	1,301,323	$112,759,600
Exported	4,045,795c	284,196,790
	5,347,118	$396,956,390
Gross Production	7,040,561	$527,814,916

a: Total production less exports and pulp made for mills own use.
b: Gross value of production less paper production and pulp exports.
c: Excludes tonnage of bags, cartons, and other paper products having value of $3,241,015.

Source: Dominion Bureau of Statistics.

Table 15.
Markets 1946

These figures show the relation between wood pulp production and export markets:

Pulp Exports

	Tons	Value
To U.S.A.	1,252,648	$ 99,972,972
To U.K.	119,973	10,122,012
Elsewhere	45,937	3,925,675
Total pulp exports	1,418,558	$114,020,659
Made for domestic use	5,542,632	183,532,019
	6,961,190	$297,552,678

Of the 5,542,632 tons of pulp made for domestic use, about 275,000 tons were sold on the domestic market and 5,267,747 tons valued at $166,694,152 were converted into 5,347,118 tons of paper and paper board valued at $396,956,390. The exports from this production, including paper products, were as follows:

Newsprint Exports (a)		
To U.S.A.	3,338,777	$225,622,404
To U.K.	82,888	5,954,814
To other countries	452,350	35,128,005
	3,874,015	$266,705,223
Other Paper Exports		
To U.S.A.	57,519	3,493,853
To U.K.	46,842	4,433,327
To other countries	67,419	9,564,387
	171,780	$ 17,491,567
Paper Products Exports (b)		
To U.S.A.	—	$ 528,049
To U.K.	—	152,611
To other countries	—	2,560,355
	—	$ 3,241,015
Paper Exports	4,045,795	$287,437,805
Pulp and Paper Exports	5,464,353	$401,458,464

a: Includes mutilated newsprint.
b: Includes bags, box, hanging paper, and miscellaneous paper products.

Source: Dominion Bureau of Statistics.

Table 16.
Pulp Use and Sale 1946

The figures in this table showing the amount of pulp made for various purposes naturally differ fractionally from those of actual exports, domestic sales, and domestic consumption during the 1946 year.

Tons	Made for own use	Made for Domestic Sale	Made for sale abroad	Total Production
Groundwood	3,712,324	18,251	267,273	3,997,848
Sulphite	761,068	157,494	911,455	1,830,017
Sulphate	318,258	42,062	201,913	562,233
Screenings & others	130,317	55,733	39,262	225,312
	4,921,967	273,540	1,419,903	6,615,410

Source: Dominion Bureau of Statistics.

Table 17.
Paper Production 1946

	Tons	Value
Newsprint	4,162,158	$280,809,610
Book & Writing	189,318	29,995,156
Wrapping	175,369	20,797,070
Paperboard	683,643	50,213,833
Tissue	56,717	9,015,540
All other	79,913	6,125,181
	5,347,118	$396,956,390

Source: Dominion Bureau of Statistics.

Table 18.

Pulp and Paper Exports 1946

	Total Exports		To U.S.A.		To Other Countries	
	Tons	Value	Tons	Value	Tons	Value
PULP —						
Sulphate Kraft	204,769	16,998,605	193,480	16,033,011	11,289	956,594
Sulphite, bleached						
Dissolving	244,879	27,211,028	195,552	21,654,713	49,327	5,556,315
Paper Grades	215,624	19,802,354	197,514	18,056,026	18,110	1,746,328
Sulphite, unbleached						
Strong	325,688	25,786,632	281,027	22,260,812	44,661	3,525,820
News Grade	120,521	9,333,490	115,545	8,984,933	4,976	348,557
Total	1,111,481	$ 99,132,109	983,118	$ 86,989,495	128,363	$12,142,614
Mechanical	268,290	12,571,257	230,937	10,669,224	37,353	1,902,033
Other Pulps	19,667	1,763,821	19,667	1,763,821	—	—
Screenings						
Chemical	11,326	390,881	11,326	390,881	—	—
Mechanical	7,794	162,591	7,600	159,551	194	3,040
Total	307,077	$ 14,888,550	269,530	$ 12,983,477	37,547	$ 1,905,073
TOTAL PULP	1,418,558	$114,020,659	1,252,648	$ 99,972,972	165,910	$14,047,687
NEWSPRINT PAPER —						
Standard	3,858,467	265,864,969	3,323,238	224,782,463	535,229	41,082,506
Mutilated	15,548	840,254	15,539	839,941	9	313
TOTAL NEWSPRINT	3,874,015	$266,705,223	3,338,777	$225,622,404	535,238	$41,082,819
OTHER PAPER —						
Wrapping — Coated	2,259	428,117	13	4,499	2,246	423,618
Wrapping — Kraft — n.o.p.	14,270	1,720,167	264	31,135	14,006	1,689,032
Wrapping — n.o.p.	5,924	941,112	1,410	103,207	4,514	837,905
Book	24,676	3,580,946	8,532	717,197	16,144	2,863,749
Bond & Writing	6,175	1,410,794	70	4,804	6,105	1,405,990
Paperboard — n.o.p.	59,799	5,622,884	7,928	685,021	51,871	4,937,863
Roofing — All Kinds	4,146	330,205	447	35,632	3,699	294,573
Pulp & Fibre Wallboards	14,294	1,234,205	1,129	101,007	13,165	1,133,198
Waste Paper — n.o.p.	10,421	264,338	10,380	261,371	41	2,967
Pulpboard for Wallboard	27,610	1,562,941	27,305	1,540,061	305	22,880
Tissue	328	87,666	38	9,251	290	78,415
Toilet	1,878	308,192	3	668	1,875	307,524
TOTAL OTHER PAPER	171,780	$ 17,491,567	57,519	$ 3,493,853	114,261	$13,997,714
PAPER PRODUCTS (a)						
Bags, Boxes & Cartons		197,284	—	20,418	—	176,866
Bags	—	622,146	—	84,179	—	537,967
Boxes & Cartons	—	687,149	—	177,815	—	509,334
Hangings or Wall	—	70,080	—	70,080	—	—
Hanging not Printed	—	378,821	—	43,531	—	335,290
Writing — n.o.p.	—	5,412	—	99	—	5,313
Handkerchiefs Tissues	—	23,837	—	—	—	23,837
Napkins & Towels	—	1,256,286	—	131,927	—	1,124,359
Other Paper Products	—	$ 3,241,015	—	$ 528,049	—	$ 2,712,966
TOTAL PAPER PRODUCTS	—	$401,458,464	4,648,944	$329,617,278	815,409	$71,841,186
GRAND TOTAL — Tons	5,464,353					

n.o.p. Not otherwise provided for.

a: Weight of paper products is unavailable.

Source: Dominion Bureau of Statistics.

"C" — PULP STATISTICS

Table 19.

Pulp Production and Exports

All grades: chemical, mechanical and screenings.

	Production		Exports	
	Tons	Value	Tons	Value
1920	1,960,102	Not available	819,985	$ 76,383,978
1921	1,549,082	$ 78,338,278	527,222	33,133,675
1922	2,150,251	84,947,598	818,257	41,037,849
1923	2,475,904	99,073,203	875,358	47,027,496
1924	2,465,011	90,323,972	781,983	40,242,972
1925	2,772,507	100,216,383	961,367	47,931,905
1926	3,229,791	115,154,199	1,005,780	52,077,122
1927	3,278,978	114,442,550	879,154	46,996,041
1928	3,608,045	121,184,214	863,801	45,614,823
1929	4,021,229	129,033,154	830,848	43,367,984
1930	3,619,345	112,355,872	760,220	39,059,979
1931	3,167,960	84,780,809	622,537	30,056,643
1932	2,663,248	64,412,453	452,293	18,930,064
1933	2,979,562	64,114,074	608,510	23,354,637
1934	3,636,335	75,726,958	605,641	25,444,844
1935	3,868,341	79,722,039	662,475	27,625,730
1936	4,485,445	92,336,953	754,496	31,246,695
1937	5,141,504	116,729,228	870,716	41,815,731
1938	3,667,789	89,897,148	554,037	27,730,738
1939	4,166,301	97,131,817	705,516	31,000,602
1940	5,290,762	149,005,267	1,068,516	60,930,149
1941	5,720,847	175,439,551	1,411,725	85,897,736
1942	5,606,461	192,145,062	1,510,746	96,266,873
1943	5,272,830	194,519,152	1,556,457	100,012,775
1944	5,271,137	211,041,412	1,408,081	101,563,024
1945	5,600,814	231,873,122	1,434,527	106,054,911
1946	6,615,410	287,624,227	1,418,558	114,020,659

Source: Dominion Bureau of Statistics.

Table 20.

Chemical Pulp Production and Exports

All grades. Screenings not included.

	Tons Produced	Value of Production	Tons Exported
1915	.....	.....	157,469
1916	.....	.....	229,147
1917	540,577	.....	261,760
1918	677,683	.....	402,850
1919	725,187	.....	397,578
1920	869,988	.....	515,641
1921	612,467	$ 45,929,513	303,728
1922	897,533	53,615,692	503,487
1923	1,012,391	60,688,318	534,251
1924	986,508	53,344,343	528,283
1925	1,085,226	59,979,633	601,163
1926	1,251,178	69,220,427	623,703
1927	1,278,572	69,169,002	599,478
1928	1,392,755	72,500,188	628,438
1929	1,501,273	76,198,051	585,108
1930	1,265,057	63,156,351	527,800
1931	1,086,735	46,998,998	443,903
1932	913,438	35,987,294	328,532
1933	1,092,813	38,552,677	459,772
1934	1,211,719	44,555,528	472,447
1935	1,276,400	47,171,965	519,480
1936	1,462,659	53,356,519	597,512
1937	1,707,889	69,538,019	680,264
1938	1,124,312	47,990,730	421,597
1939	1,342,448	53,369,808	526,774
1940	1,879,812	92,553,463	857,193
1941	2,122,292	113,128,794	1,121,784
1942	2,246,438	126,208,457	1,213,587
1943	2,188,026	129,952,141	1,259,670
1944	2,109,169	138,140,452	1,156,442
1945	2,166,820	144,352,170	1,145,660
1946	2,434,400	172,959,381	1,131,148

Source: Dominion Bureau of Statistics.

Table 21.

Chemical Pulp Exports

All grades. Screenings not included.

Tons	Sulphite	Sulphate	Other	Total
1931	385,421	54,993	3,488	443,902
1932	287,930	38,531	2,071	328,532
1933	395,715	59,320	4,738	459,773
1934	376,460	88,037	7,950	472,447
1935	411,817	96,954	10,709	519,480
1936	464,739	119,400	13,373	597,512
1937	546,141	122,781	11,342	680,264
1938	335,273	76,286	10,039	421,598
1939	408,846	108,869	9,059	526,774
1940	708,806	136,052	12,334	857,192
1941	919,737	185,365	16,682	1,121,784
1942	1,013,505	181,325	18,757	1,213,587
1943	960,297	178,876	17,269	1,156,442
1945	942,874	181,015	21,771	1,145,660
1946	906,712	204,769	19,667	1,131,148

Source: Dominion Bureau of Statistics.

Table 22.

Bleached Sulphite Pulp

	Production		Apparent Consumption (b)		Exports		Imports	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
1920	138,624	$21,301,465	a	a	a	a	a	a
1921	154,804	14,481,158	78,028	$ 6,943,230	76,801	7,540,128	25	$ 2,200
1922	146,690	11,691,904	169	—286,705	146,705	11,993,202	184	14,593
1923	189,935	15,307,069	30,269	1,756,598	159,873	13,568,320	207	17,849
1924	200,764	14,653,587	34,975	2,276,040	165,868	12,383,645	79	6,098
1925	227,465	16,981,584	41,897	2,956,482	185,888	14,049,500	320	24,398
1926	256,868	19,645,060	56,131	3,929,938	200,994	15,734,220	257	19,098
1927	289,313	21,087,792	52,299	2,697,969	237,227	18,407,169	213	17,346
1928	304,769	22,451,771	53,520	3,371,582	251,542	19,112,964	293	32,775
1929	324,548	23,814,234	71,327	4,631,905	253,809	19,246,692	588	64,363
1930	293,394	19,619,367	45,587	1,764,164	249,098	17,954,714	1,291	99,511
1931	301,357	16,978,118	39,858	712,918	261,700	16,282,735	201	17,535
1932	256,478	13,081,700	48,928	1,909,832	207,711	11,181,623	161	9,755
1933	355,812	16,109,572	60,775	1,967,673	295,111	14,145,283	74	3,384
1934	340,262	18,034,000	66,205	3,431,395	274,144	14,607,138	87	4,533
1935	374,157	19,551,605	61,119	3,309,409	313,144	16,249,656	106	7,460
1936	429,714	22,259,923	78,094	3,884,783	351,651	18,376,727	31	1,587
1937	459,041	27,135,378	89,187	5,038,025	369,874	22,099,127	20	1,774
1938	304,834	18,818,095	68,457	3,080,445	236,438	15,742,741	61	5,091
1939	404,268	21,284,125	105,477	4,639,358	299,686	16,697,177	895	52,410
1940	543,987	36,576,496	118,166	6,879,197	427,482	29,812,822	1,661	115,523
1941	590,812	43,408,549	110,246	6,363,374	481,597	37,137,254	1,031	92,079
1942	597,316	43,809,756	135,876	7,618,564	463,301	36,382,124	1,861	190,932
1943	587,538	44,994,159	124,638	7,838,345	465,946	37,528,067	3,046	372,253
1944	585,699	48,767,224	154,570	10,565,098	434,520	38,614,714	3,391	412,588
1945	603,929	50,919,572	144,890	8,799,107	462,038	42,491,042	2,999	370,577
1946	616,797	58,859,624	160,415	12,358,355	460,503	47,013,382	4,121	512,113

a: Not available prior to 1921.
b: Estimated on the basis of production plus imports minus exports.

Source: Dominion Bureau of Statistics.

Table 23.

Unbleached Sulphite Pulp

	Production		Apparent Consumption (b)		Exports		Imports	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
1920	515,649	$ 48,778,369	a	a	a	a	a	a
1921	322,125	22,002,694	208,964	$ 14,149,662	127,389	$ 9,122,612	14,228	$ 1,269,580
1922	532,188	29,222,369	339,132	19,607,942	208,446	10,477,746	15,390	863,319
1923	595,891	31,704,333	382,116	20,066,596	228,033	12,406,093	14,258	768,358
1924	567,271	26,829,927	365,345	16,393,942	222,227	11,611,367	20,301	1,175,382
1925	615,320	29,670,655	370,251	16,641,014	265,553	14,150,271	20,484	1,120,630
1926	738,235	35,406,932	501,588	21,969,773	254,574	14,393,546	17,927	956,387
1927	726,747	33,803,631	556,515	24,699,183	192,557	10,269,560	22,325	1,165,112
1928	812,458	35,359,990	620,007	25,658,878	214,126	10,738,977	21,675	1,037,865
1929	911,684	38,144,801	733,636	29,356,266	196,978	9,713,979	18,930	925,444
1930	783,410	32,494,078	608,923	23,907,192	187,424	9,201,250	12,937	614,364
1931	640,222	22,433,990	529,242	17,813,130	123,721	5,146,954	12,741	526,094
1932	512,593	16,174,624	445,446	14,009,417	80,219	2,606,647	13,072	441,440
1933	553,801	15,070,885	458,627	12,171,104	100,604	3,067,525	5,430	167,744
1934	650,380	17,933,546	556,150	14,812,620	102,316	3,373,231	8,086	252,305
1935	644,820	17,546,789	562,251	14,878,220	98,673	3,186,894	16,104	518,325
1936	739,213	19,900,576	645,133	16,873,919	113,088	3,634,971	19,008	608,314
1937	914,191	28,355,232	758,367	21,101,623	176,267	7,907,788	20,443	654,179
1938	575,263	19,037,310	492,398	15,499,591	98,835	4,048,165	15,970	510,446
1939	624,552	19,998,275	534,726	16,696,992	109,160	3,954,980	19,334	653,697
1940	936,558	36,941,108	673,243	22,766,789	281,324	14,857,150	18,009	682,831
1941	1,073,704	46,797,067	651,611	21,708,638	438,140	25,942,972	16,047	854,543
1942	1,156,137	55,524,053	625,522	22,732,914	550,204	33,898,728	19,589	1,107,589
1943	1,125,033	58,076,305	553,108	22,158,932	590,541	36,997,343	18,616	1,079,880
1944	1,023,930	59,891,667	508,509	23,344,259	525,777	37,235,232	10,356	687,824
1945	1,035,755	61,923,471	565,677	27,748,246	480,836	34,916,473	10,758	741,248
1946	1,213,220	76,000,948	777,306	41,652,523	446,209	35,120,122	10,295	771,697

a: Not available prior to 1921.
b: Estimated on the basis of production plus imports minus exports.

Source: Dominion Bureau of Statistics.

Table 24.

Sulphate Pulp

	Production		Apparent Consumption (b)		Exports		Imports	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
1920	188,487	$ 19,437,843	55,341a	$ 6,632,383a	133,146	$ 12,805,460	a	$ a
1921	131,337	9,062,252	31,798a	1,863,029a	99,539	7,199,223	a	a
1922	217,862	12,643,604	69,526a	3,476,786a	148,336	9,166,818	a	a
1923	224,813	13,559,189	78,468a	4,105,431a	146,345	9,453,758	a	a
1924	215,422	11,665,412	75,351	3,338,681	140,183	8,331,931	112	5,200
1925	242,207	13,244,379	92,485	4,085,518	149,722	9,158,861	—	—
1926	250,234	13,829,868	82,100	3,386,330	168,134	10,443,538	—	—
1927	251,266	13,598,815	81,573	3,405,508	169,693	10,193,307	—	—
1928	256,969	13,581,559	94,198	3,985,693	162,771	9,595,866	—	—
1929	250,104	13,191,726	115,783	5,335,259	134,321	7,856,486	c	19
1930	175,449	10,274,666	91,030	5,171,760	86,091	5,151,652	1,672	48,746
1931	136,489	7,153,530	82,479	3,573,549	54,993	3,617,444	983	37,463
1932	137,234	6,374,320	98,709	3,956,657	38,531	2,418,760	6	1,097
1933	171,236	6,859,680	111,918	3,809,541	59,320	3,050,208	2	69
1934	205,980	7,963,110	117,943	3,745,867	88,037	4,217,243	—	—
1935	236,536	9,119,496	139,582	4,209,517	96,954	4,909,979	—	—
1936	273,494	10,234,715	154,095	4,667,531	119,400	5,567,284	1	100
1937	312,741	12,920,977	189,960	6,155,567	122,781	6,765,430	d	20
1938	225,032	9,216,421	149,385	4,806,769	76,286	4,435,757	639	26,105
1939	292,066	11,074,010	184,309	5,379,191	108,869	5,741,152	1,112	46,333
1940	371,569	17,389,346	235,676	8,236,950	136,052	9,161,716	159	9,320
1941	426,743	20,940,034	241,378	8,372,148	185,365	12,567,886	—	—
1942	459,254	24,718,685	277,929	11,825,165	181,325	12,893,520	—	—
1943	441,421	24,636,048	258,130	11,119,381	183,291	13,516,667	—	—
1944	467,726	27,226,197	288,850	13,362,440	178,876	13,863,757	—	—
1945	478,740	28,731,109	297,725	14,360,805	181,015	14,370,304	—	—
1946	562,233	35,246,426	357,464	18,247,821	204,769	16,998,605	—	—

a: Imports not available prior to 1924.
b: Estimated on basis of production plus imports minus exports.
c: 700 pounds only.
d: 900 pounds only.

Source: Dominion Bureau of Statistics.

Table 25.

Mechanical Pulp

	Production		Apparent Consumption (b)		Exports		Imports	
	Tons	Value	Tons	Value	Tons	Value	Tons	Value
1920	1,090,114	$ 49,890,337	a	$ a	304,344	$ 17,574,806	a	$ a
1921	931,560	32,313,848	a	a	223,494	9,271,712	a	a
1922	1,241,185	31,079,429	a	a	314,770	9,400,083	a	a
1923	1,419,547	37,587,379	a	a	341,107	11,599,323	a	a
1924	1,427,726	36,163,381	1,176,962	28,361,101	253,700	7,916,029	2,936	113,749
1925	1,621,917	39,130,117	1,263,066	28,601,684	360,204	10,573,273	1,353	44,840
1926	1,901,268	44,800,257	1,521,914	33,402,964	382,077	11,505,818	2,723	108,525
1927	1,922,124	44,174,811	1,661,645	36,437,822	260,831	7,761,464	352	24,475
1928	2,127,699	47,549,324	1,924,218	42,022,091	203,670	5,546,120	189	18,887
1929	2,420,774	51,617,360	2,211,640	45,734,836	209,332	5,906,638	198	24,114
1930	2,283,130	48,317,494	2,076,976	42,413,073	208,758	5,967,172	2,604	62,751
1931	2,016,480	37,096,768	1,851,786	32,497,323	165,098	4,606,167	404	6,722
1932	1,696,021	28,018,451	1,579,832	25,459,838	116,229	2,562,089	40	3,476
1933	1,824,553	25,150,963	1,692,559	22,466,458	132,152	2,688,023	158	3,518
1934	2,340,441	30,556,675	2,220,352	27,829,717	120,121	2,727,902	32	944
1935	2,504,595	32,034,716	2,380,657	29,408,820	124,055	2,631,945	117	6,049
1936	2,910,338	38,251,389	2,776,863	35,412,990	133,518	2,841,051	43	2,652
1937	3,308,517	46,144,208	3,142,130	42,028,791	166,802	4,145,552	415	30,135
1938	2,461,997	39,228,178	2,338,032	36,330,722	124,205	2,914,247	240	16,791
1939	2,738,011	43,062,396	2,569,380	38,973,434	168,652	4,090,177	21	1,215
1940	3,305,484	55,504,763	3,101,536	49,244,546	204,090	6,265,069	142	4,852
1941	3,494,922	61,327,268	3,227,335	52,614,791	271,162	8,835,808	3,575	123,331
1942	3,260,097	64,801,837	2,981,732	54,294,388	278,365	10,507,449	—	—
1943	2,998,913	63,426,919	2,726,013	53,358,327	272,900	10,068,592	—	—
1944	3,076,296	71,668,673	2,839,751	61,534,290	236,545	10,134,383	—	—
1945	3,341,920	86,375,001	3,068,767	74,327,944	273,906	12,101,310	753	54,253
1946	3,997,848	111,514,231	3,729,613	98,950,120	268,290	12,571,257	55	7,146

a: Imports not available prior to 1924.
b: Estimated on basis of production plus imports minus exports.

Source: Dominion Bureau of Statistics.

Table 26.

Screenings — Chemical

	Production		Apparent Consumption (b)		Exports (a)	
	Tons	Value	Tons	Value	Tons	Value
1935	28,230	$ 226,254	19,915	$ 116,543	8,315	$109,711
1936	38,504	305,942	27,710	172,592	10,794	133,350
1937	48,871	527,450	38,772	360,205	10,099	167,245
1938	22,739	198,939	20,112	155,506	2,627	43,433
1939	27,760	231,642	24,400	192,911	3,360	38,731
1940	42,741	434,257	39,725	379,032	3,016	55,225
1941	48,270	560,969	36,665	331,953	11,605	229,016
1942	51,905	727,736	40,096	468,801	11,809	258,935
1943	51,053	787,239	33,219	379,227	17,834	408,012
1944	48,826	803,729	37,706	486,508	11,120	317,221
1945	53,121	797,527	42,725	487,527	10,396	310,000
1946	66,277	1,268,027	54,951	877,146	11,326	390,881

a: Estimated on basis of known quantity and value "made for export" prior to 1946.

b: Estimated on basis of production minus exports.

Source: Dominion Bureau of Statistics.

Table 27.

Screenings — Mechanical

	Production		Apparent Consumption (b)		Exports (a)	
	Tons	Value	Tons	Value	Tons	Value
1935	59,116	$ 289,104	48,491	$ 217,175	10,625	$ 71,929
1936	73,944	423,103	61,272	320,853	12,672	102,250
1937	76,227	519,551	62,676	374,188	13,551	145,363
1938	58,741	479,301	53,133	423,571	5,608	55,730
1939	58,082	467,971	51,352	399,117	6,730	68,854
1940	62,725	512,784	58,507	451,131	4,218	61,653
1941	55,363	422,520	48,189	334,339	7,174	88,181
1942	48,021	407,032	41,036	323,913	6,985	83,119
1943	34,838	294,784	28,785	245,482	6,053	49,302
1944	36,846	428,558	32,872	387,684	3,974	40,874
1945	38,953	348,424	34,388	306,599	4,565	41,825
1946	68,876	863,096	61,082	700,505	7,794	162,591

a: Estimated on basis of known quantity and value "made for export" prior to 1946.

b: Estimated on basis of production minus exports.

Source: Dominion Bureau of Statistics.

Table 28.

Mechanical Pulp Utilization.

Year	Production		Made for own use		Made for export		Made for domestic sale	
	Tons	$	Tons	$	Tons	$	Tons	$
1920	1,090,114	49,890,337	702,519	23,505,693	280,516	19,958,761	107,079	6,425,883
1921	931,560	32,313,848	643,164	20,267,227	255,680	10,837,011	32,716	1,209,610
1922	1,241,185	31,079,429	888,783	20,540,929	304,590	9,222,381	47,812	1,316,119
1923	1,419,547	37,587,379	1,024,051	23,904,778	353,352	12,295,143	42,144	1,387,458
1924	1,427,726	36,163,381	1,088,877	26,064,031	265,083	7,921,074	73,766	2,178,276
1925	1,621,917	39,130,117	1,211,558	27,492,409	335,962	9,593,020	74,397	2,044,688
1926	1,901,268	44,800,257	1,471,982	33,190,921	402,228	10,913,798	27,058	695,538
1927	1,922,124	44,174,811	1,665,859	37,421,874	241,358	6,347,800	14,907	405,137
1928	2,127,699	47,549,324	1,926,063	42,641,890	190,545	4,611,424	11,091	296,010
1929	2,420,774	51,617,360	2,179,035	45,662,246	221,598	5,392,698	20,141	562,416
1930	2,283,130	48,317,494	2,049,581	42,504,632	217,182	5,418,702	16,367	394,160
1931	2,016,480	37,096,768	1,822,083	32,655,912	186,082	4,224,234	8,315	216,622
1932	1,696,021	28,018,451	1,551,703	25,238,000	130,377	2,510,950	13,941	269,501
1933	1,824,553	25,150,963	1,667,921	22,557,925	142,154	2,324,549	14,478	268,489
1934	2,340,441	30,556,675	2,184,522	27,702,260	145,441	2,643,403	10,478	211,012
1935	2,504,595	32,034,716	2,353,055	29,457,426	140,819	2,375,395	10,721	201,895
1936	2,910,338	38,251,389	2,743,712	35,253,678	157,462	2,798,240	9,164	199,471
1937	3,308,517	46,144,208	3,122,677	42,173,942	174,856	3,714,485	10,984	255,781
1938	2,461,997	39,228,178	2,301,546	35,870,198	152,175	3,154,105	8,276	203,875
1939	2,738,011	43,062,396	2,557,172	38,948,923	169,615	3,843,272	11,224	270,201
1940	3,305,484	55,504,763	3,068,875	48,709,161	219,156	6,280,828	17,453	514,774
1941	3,494,922	61,327,268	3,204,132	52,246,938	270,744	8,458,142	20,046	622,188
1942	3,260,097	64,801,837	2,958,683	54,293,231	285,134	10,020,256	16,280	488,350
1943	2,998,913	63,426,919	2,761,063	54,548,106	227,082	8,503,813	10,768	375,000
1944	3,076,296	71,668,673	2,842,316	62,207,170	222,944	9,082,705	11,036	378,798
1945	3,341,920	86,375,001	3,058,254	74,383,799	272,048	11,569,715	11,618	421,487
1946	3,997,848	111,514,231	3,712,324	97,612,211	267,273	13,170,735	18,251	731,285

Note: Tonnage "made for export" differs slightly from actual exports.

Source: Dominion Bureau of Statistics.

Table 29.

Bleached Sulphite Pulp Utilization

All grades

Year	Production Tons	Production $	Made for own use Tons	Made for own use $	Made for export Tons	Made for export $	Made for domestic sale Tons	Made for domestic sale $
1920	138,624	21,301,465	3,630	471,323	98,924	15,191,918	36,070	5,638,224
1921	154,804	14,481,158	43,291	3,323,989	95,471	9,424,191	16,042	1,732,978
1922	146,690	11,691,904	7,248	575,791	66,072	4,822,035	73,370	6,294,078
1923	189,935	15,307,069	10,004	770,537	62,937	4,718,206	116,994	9,818,326
1924	200,764	14,653,587	14,355	1,085,957	63,495	4,467,518	122,914	9,100,112
1925	227,465	16,981,584	18,817	1,397,013	188,225	14,010,078	20,423	1,574,493
1926	256,868	19,645,060	20,893	1,466,456	209,132	16,087,135	26,843	2,091,469
1927	289,313	21,087,792	22,228	1,587,816	240,388	17,433,858	26,697	2,066,118
1928	304,769	22,451,771	26,906	1,943,274	248,876	18,283,405	28,987	2,225,092
1929	324,548	23,814,234	22,953	1,594,513	261,982	19,191,199	39,613	3,028,522
1930	293,394	19,619,367	20,624	1,355,956	250,590	16,718,331	22,180	1,545,080
1931	301,357	16,978,118	22,932	1,385,381	256,225	14,217,203	22,200	1,375,534
1932	256,478	13,081,700	21,600	1,217,878	197,887	9,986,973	36,991	1,876,849
1933	335,812	16,109,572	21,330	1,049,613	298,807	13,351,247	35,675	1,708,712
1934	340,262	18,034,000	21,953	1,134,018	282,950	14,923,285	35,359	1,976,697
1935	374,157	19,551,605	26,422	1,324,147	306,880	16,005,916	40,855	2,221,542
1936	429,714	22,259,923	27,930	1,442,039	350,598	18,171,792	51,186	2,646,092
1937	459,041	27,135,378	31,138	1,625,488	376,816	22,408,866	51,087	3,101,024
1938	304,834	18,818,095	32,565	1,679,016	229,222	14,693,602	43,047	2,445,477
1939	404,268	21,284,125	38,917	1,877,350	312,490	16,748,534	52,861	2,658,241
1940	543,987	36,576,496	47,429	2,713,333	430,498	29,534,721	66,060	4,328,442
1941	520,812	43,408,549	50,500	2,880,325	471,819	35,759,039	68,493	4,769,185
1942	597,316	43,809,756	53,071	3,208,471	464,708	34,956,661	79,537	5,644,624
1943	587,538	44,994,159	50,636	3,196,336	456,772	35,970,277	80,130	5,827,546
Dissolving Pulp								
1944	235,417	21,198,634	—	—	216,754	19,556,214	18,663	1,642,420
1945	233,826	22,025,991	—	—	210,570	20,093,763	23,256	1,932,228
1946	271,563	29,401,676	—	—	252,811	27,586,624	18,752	1,815,052
Paper Pulp								
1944	350,282	27,568,590	58,001	3,875,298	230,536	19,161,223	61,745	4,532,069
1945	370,103	28,893,581	59,215	3,977,471	242,335	20,280,140	68,553	4,635,970
1946	345,234	29,457,948	60,672	4,717,451	210,053	19,179,403	74,509	5,561,094

Note: Tonnage "made for export" differs slightly from actual exports.

Source: Dominion Bureau of Statistics.

Table 30.

Unbleached Sulphite Pulp Utilization

All grades

Year	Production Tons	Production $	Made for own use Tons	Made for own use $	Made for export Tons	Made for export $	Made for domestic sale Tons	Made for domestic sale $
1920	515,649	48,778,369	199,507	13,210,198	235,148	26,871,141	80,994	8,697,030
1921	322,125	22,002,694	155,504	10,125,712	125,564	8,794,289	41,057	3,082,693
1922	532,188	29,222,369	242,832	12,189,239	205,484	11,470,986	83,872	5,562,144
1923	595,891	31,704,333	300,879	14,946,551	256,946	14,642,292	38,066	2,115,490
1924	567,271	26,829,927	317,289	14,296,723	199,946	10,041,802	50,036	2,491,402
1925	615,320	29,670,655	342,556	15,946,841	238,680	12,046,571	34,084	1,677,243
1926	738,235	35,406,932	441,178	20,081,548	239,274	12,273,559	57,783	3,051,825
1927	726,747	33,803,631	477,703	21,112,051	200,701	10,276,753	48,343	2,414,827
1928	812,458	35,359,990	568,728	24,083,077	200,739	9,388,709	42,991	1,888,204
1929	911,684	38,144,801	662,541	26,833,383	198,257	9,003,690	50,886	2,307,728
1930	783,410	32,494,078	562,351	22,609,783	184,357	8,204,866	36,702	1,679,429
1931	640,222	22,433,990	484,372	16,685,105	127,768	4,655,237	28,082	1,093,648
1932	512,593	16,174,624	423,420	13,295,206	68,926	2,131,936	20,247	747,482
1933	553,801	15,070,885	420,254	11,253,461	101,697	2,832,123	31,580	985,301
1934	650,380	17,933,546	514,888	13,260,916	101,424	3,545,144	34,068	1,127,486
1935	644,820	17,546,789	510,718	13,148,182	96,794	3,196,209	37,308	1,202,398
1936	739,213	19,900,576	593,082	15,101,762	105,843	3,440,025	40,288	1,358,789
1937	914,191	28,355,232	680,272	18,387,452	181,543	8,219,273	52,376	1,748,507
1938	575,263	19,037,310	448,196	14,122,812	88,216	3,503,632	38,851	1,410,866
1939	624,552	19,998,275	471,622	14,295,782	109,707	4,175,986	43,223	1,526,507
1940	926,558	36,941,108	583,996	19,349,378	302,723	15,521,265	49,839	2,070,465
1941	1,073,704	46,797,067	607,581	20,602,150	413,496	23,802,433	52,627	2,392,484
1942	1,156,137	55,524,053	553,291	20,479,162	554,653	32,745,486	48,193	2,299,405
1943	1,125,033	58,076,395	500,925	19,991,947	578,824	35,781,920	45,284	2,302,528
Strong Grade								
1944	232,634	15,332,609	38,353	1,885,403	185,984	12,941,871	8,297	505,335
1945	246,020	16,744,422	33,888	1,814,052	196,108	14,018,841	16,024	911,529
1946	271,026	20,734,898	37,497	2,152,375	216,597	17,389,919	16,932	1,192,604
News Grade								
1944	791,296	44,559,058	415,496	18,548,309	338,455	24,102,446	37,345	1,908,303
1945	789,735	45,179,049	484,345	23,478,246	275,497	20,050,133	29,893	1,650,670
1946	942,194	55,266,050	662,899	34,513,585	231,994	18,006,804	47,301	2,745,661

Note: Tonnage "made for export" differs slightly from actual exports.

Source: Dominion Bureau of Statistics.

Table 31.

Sulphate Pulp Utilization

Year	Production Tons	Production $	Made for own use Tons	Made for own use $	Made for export Tons	Made for export $	Made for domestic sale Tons	Made for domestic sale $
1920	188,487	19,437,843	51,041	4,058,745	132,468	14,795,631	4,978	583,467
1921	131,337	9,062,252	24,903	1,990,272	101,461	6,813,671	4,973	258,309
1922	217,862	12,643,604	48,611	2,875,567	156,499	9,120,541	12,752	647,496
1923	224,813	13,559,189	52,803	2,886,829	162,200	10,065,224	9,810	607,136
1924	215,422	11,665,412	53,615	2,642,705	153,661	8,572,496	8,146	450,211
1925	241,252	13,244,379	57,218	2,686,666	174,640	10,044,519	9,394	513,194
1926	250,234	13,829,868	58,771	2,697,736	183,017	10,616,841	8,446	515,291
1927	251,266	13,598,815	62,415	2,849,904	178,039	10,126,434	10,812	622,477
1928	256,969	13,581,559	68,853	3,038,540	175,315	9,835,215	12,801	707,804
1929	250,104	13,191,726	80,705	3,720,054	144,412	8,194,428	24,987	1,277,244
1930	175,449	10,274,666	68,219	3,390,860	95,369	6,223,148	11,861	660,658
1931	136,489	7,153,530	66,595	3,030,078	56,738	3,379,939	13,156	743,513
1932	137,234	6,374,320	72,527	2,921,326	45,728	2,583,940	18,979	869,054
1933	171,236	6,859,680	82,647	2,714,549	65,921	3,126,646	22,668	1,018,485
1934	205,980	7,963,110	99,133	2,904,586	84,548	3,975,192	22,299	1,083,332
1935	236,536	9,119,496	108,635	3,105,874	97,551	4,627,928	30,350	1,385,694
1936	273,494	10,234,715	125,386	3,406,156	116,000	5,388,004	32,108	1,440,555
1937	312,741	12,920,977	152,918	4,295,794	125,790	6,882,697	34,033	1,742,486
1938	225,032	9,216,421	119,817	3,831,693	77,583	4,038,182	27,632	1,346,546
1939	292,066	11,074,010	154,755	4,650,666	104,797	4,905,738	32,514	1,517,606
1940	371,569	17,389,346	191,734	6,080,775	138,388	9,021,053	41,447	2,287,518
1941	426,743	20,940,034	215,456	7,175,462	167,166	11,144,647	44,121	2,619,925
1942	459,254	24,718,685	225,481	8,782,287	181,089	13,254,331	52,684	3,182,067
1943	441,421	24,636,048	211,988	8,494,224	182,410	13,462,641	47,023	2,679,183
1944	467,726	27,226,197	242,405	10,747,651	179,313	13,981,790	46,008	2,496,756
1945	478,740	28,731,109	249,816	11,786,501	182,189	14,264,401	46,735	2,680,207
1946	562,233	35,246,426	318,258	15,579,086	201,913	16,907,709	42,062	2,759,631

Note: Tonnage "made for export" differs slightly from actual exports.

Source: Dominion Bureau of Statistics.

Table 32.

Destination of Pulp Exports

To:	Sulphite Tons 1946	Sulphite Tons 1945	Sulphate Tons 1946	Sulphate Tons 1945
United States	789,638	697,136	193,480	147,800
British Empire	100,081	229,585	10,233	32,236
Latin America	13,913	14,587	278	979
Europe	2,289	1,566	278	0
Asia	791	0	500	0
	906,712	942,874	204,769	181,015

Source: Dominion Bureau of Statistics.

Table 33.

Average Values of U.S. Pulp Imports

Because each type of pulp is manufactured in a variety of grades, and because Canadian pulps differ from those manufactured elsewhere, the following figures are useful merely to indicate past trends:

Per ton	Bleached Sulphite	Unbleached Sulphite	Bleached Sulphate	Unbleached Sulphate	Soda	Mechanical
1927	$69.52	$49.83	$58.65	$54.13	nil	$24.27
1928	67.76	45.41	54.74	49.58	nil	21.84
1929	67.69	44.97	66.24	47.71	nil	22.84
1930	62.83	44.56	67.13	41.08	$58.44	23.88
1931	52.81	38.02	68.19	31.18	48.39	21.34
1932	42.27	29.96	75.50	28.22	37.29	17.34
1933	42.65	27.70	57.59	24.29	34.85	15.28
1934	48.75	32.27	61.68	28.53	40.82	17.14
1935	51.08	34.67	61.35	30.18	43.50	17.24
1936	50.42	34.04	57.09	31.10	44.40	17.79
1937	57.51	37.69	62.71	35.78	51.92	19.88
1938	59.53	39.11	60.59	38.11	49.29	22.66
1939	51.17	35.38	52.14	31.07	45.62	22.88
1940	65.82	44.60	68.23	40.68	55.70	27.57
1941	71.90	54.02	80.51	58.16	60.51	28.23
1942	72.86	56.09	84.55	61.08	60.26	34.57
1943	74.99	57.89	85.72	62.94	65.59	32.28
1944	84.29	65.99	85.85	66.77	71.68	38.31
1945	84.21	65.05	80.83	62.42	75.57	39.75
1946	97.23	74.29	91.31	69.72	83.15	45.78

Source: United States Pulp Producers Association.

Table 34.

Canadian Pulp in U.S. Market

The following figures cover all grades of pulp including mechanical and screenings. Over the war years imports of mechanical pulp by the United States have averaged some 17 per cent of total pulp imports.

Tons	U.S. Pulp Production	Total U.S. Imports	U.S. Imports from Canada	U.S. Exports	U.S. Net Imports
1925	3,962,217	1,663,614	880,453	37,995	1,625,619
1926	4,394,766	1,731,413	864,333	34,220	1,697,193
1927	4,313,403	1,675,768	778,999	32,006	1,643,762
1928	4,510,800	1,754,963	784,981	33,484	1,721,479
1929	4,862,885	1,880,728	796,945	54,066	1,826,662
1930	4,630,308	1,830,217	735,864	48,426	1,781,791
1931	4,409,344	1,596,421	550,127	53,308	1,543,113
1932	3,760,267	1,481,760	425,326	47,860	1,433,900
1933	4,276,204	1,941,576	550,871	79,193	1,862,383
1934	4,436,128	1,805,972	541,728	142,931	1,663,041
1935	4,925,669	1,933,249	541,078	171,710	1,761,539
1936	5,695,219	2,277,500	670,962	193,485	2,084,015
1937	6,572,918	2,394,605	712,238	322,544	2,072,061
1938	5,933,560	1,710,393	467,323	140,484	1,569,909
1939	6,993,334	2,026,441	637,953	139,504	1,886,937
1940	8,959,559	1,224,570	828,307	480,938	743,632
1941	10,375,422	1,157,886	1,130,624	328,608	829,278
1942	10,783,430	1,236,519	1,210,960	378,148	858,371
1943	9,680,462	1,305,549	1,279,886	300,700	1,004,849
1944	10,108,443	1,071,838	1,071,788	218,401	853,437
1945	10,167,200	1,754,065	1,079,014	135,997	1,618,068
1946	10,606,527	1,794,669	1,233,466	39,361	1,755,308

Source: United States Pulp Producers Association.

Table 35.

World Pulp Figures — 1946

In 000's of short tons	Production	Imports	Exports
Canada	6,555	14	1,419
Newfoundland	419	0	48
United States	10,606	1,795	39
	17,580	1,809	1,506
Finland	1,320	0	606
Norway	504	63	184
Sweden	2,957	0	1,980
	4,781	63	2,770
Other countries	3,639*	2,528*	124*
	26,000*	4,400*	4,400*

* Estimate.

Source: United States Pulp Producers Association.

Table 36.
Production and Exports of Newsprint

In 000's of Short Tons of 2,000 Pounds

	Canadian Production (a)	To United States	To United Kingdom	To Australia	To Other Countries	Total exports	Balance (b)
1919	795	623	16	36	33	708	87
1920	876	670	11	39	42	762	114
1921	805	655	..	26	28	709	96
1922	1,081	888	14	33	25	960	121
1923	1,252	1,115	..	7	16	1,138	114
1924	1,388	1,193	6	1	19	1,219	169
1925	1,537	1,321	20	8	53	1,402	135
1926	1,889	1,628	15	31	58	1,732	157
1927	2,083	1,748	42	46	46	1,882	201
1928	2,414	1,935	131	49	92	2,207	207
1929	2,725	2,173	178	63	101	2,515	210
1930	2,498	2,008	134	45	146	2,333	165
1931	2,227	1,753	104	30	121	2,008	219
1932	1,919	1,520	82	39	136	1,777	142
1933	2,022	1,520	107	58	153	1,838	184
1934	2,605	1,960	84	100	270	2,414	191
1935	2,765	2,052	115	108	300	2,575	190
1936	3,225	2,399	94	179	321	2,993	232
1937	3,674	2,899	148	118	290	3,455	219
1938	2,669	1,958	172	178	137	2,425	244
1939	2,927	2,206	177	131	145	2,659	268
1940	3,504	2,586	145	164	348	3,243	261
1941	3,520	2,762	94	73	333	3,262	258
1942	3,257	2,792	35	7	171	3,005	252
1943	3,046	2,545	30	22	213	2,810	236
1944	3,040	2,409	42	81	274	2,806	234
1945	3,324	2,534	106	90	329	3,059	265
1946	4,162	3,323	83	135	317	3,858	304

(a) Production figures include relatively small quantities of hanging paper, poster paper, and side runs for pulping.

(b) Balance consists of Canada's home consumption, plus or minus changes in stocks held by manufacturers and distortion caused by irregular freight movement at successive year ends.

Source: Dominion Bureau of Statistics.

The following figures of the Newsprint Association of Canada covering only newsprint indicate more clearly the relationship between production and domestic and export markets:

	Canadian Production	— FROM CANADIAN MILLS TO:— Canada	U.S.A.	Overseas
1933	2,012,065	148,059	1,585,176	292,879
1934	2,597,298	173,082	1,993,798	429,123
1935	2,750,850	199,689	2,008,596	526,574
1936	3,209,016	194,240	2,434,585	619,129
1937	3,647,800	219,553	2,909,360	525,756
1938	2,624,580	159,197	1,881,020	475,779
1939	2,869,266	189,482	2,194,126	477,594
1940	3,418,803	183,894	2,594,452	657,588
1941	3,425,865	196,766	2,770,002	487,897
1942	3,177,102	202,536	2,810,839	195,312
1943	2,982,797	192,820	2,549,759	266,807
1944	2,991,782	187,227	2,429,658	383,723
1945	3,259,208	200,249	2,544,116	491,054
1946	4,143,392	247,077	3,354,644	534,257

Table 37.
Canadian Newsprint in Relation to Other Sources of U.S. Imports.

In 000's of Short Tons of 2,000 Pounds

	Total U.S. Imports	From Canada Tons	% of Total	From Nfld. Tons	% of Total	From Europe Tons	% of Total
1913	220	219	99.5	..	..	1	.5
1914	315	310	98.4	..	..	5	1.6
1915	368	367	99.7	..	..	1	.3
1916	468	468	100.0	..	..	..	..
1917	559	558	99.8	..	..	1	.2
1918	596	596	100.0	..	..	..	..
1919	631	628	99.5	..	..	3	.5
1920	730	679	93.0	1	.1	50	6.9
1921	792	657	83.0	..	..	135	17.0
1922	1,029	896	87.1	..	..	133	12.9
1923	1,309	1,109	84.7	..	..	200	15.3
1924	1,357	1,197	88.2	4	.3	156	11.5
1925	1,448	1,295	89.4	20	1.4	133	9.2
1926	1,852	1,658	89.6	94	5.0	100	5.4
1927	1,987	1,776	89.5	89	4.4	122	6.1
1928	2,156	1,926	89.3	114	5.3	116	5.4
1929	2,423	2,195	90.7	132	5.4	96	3.9
1930	2,279	1,989	87.2	156	6.9	134	5.9
1931	2,065	1,754	84.9	160	7.8	151	7.3
1932	1,791	1,533	85.6	114	6.4	144	8.0
1933	1,793	1,545	86.2	95	5.3	153	8.5
1934	2,210	1,956	88.5	107	4.8	147	6.7
1935	2,383	2,062	86.5	124	5.2	197	8.3
1936	2,752	2,422	88.0	87	3.2	243	8.8
1937	3,317	2,900	87.4	123	3.7	294	8.9
1938	2,274	1,963	86.3	68	3.0	243	10.7
1939	2,615	2,206	84.4	99	3.8	310	11.8
1940	2,763	2,605	94.3	124	4.5	34	1.2
1941	2,982	2,760	92.6	219	7.3	3	.1
1942	2,921	2,779	95.2	141	4.8	1	..
1943	2,637	2,535	96.1	102	3.9	..	..
1944	2,491	2,395	86.2	96	3.8	..	..
1945	2,669	2,527	94.7	142	5.3	..	..
1946	3,490	3,272	93.7	205	5.9	13	.4

Source: News Print Service Bureau.

Table 38.

Newsprint Available for Consumption in the United States

In 000's of Short Tons of 200 Pounds

	Domestic Production	Imports	Exports	Available for Consumption	Apparent Consumption	Per Capita Consumption # (lbs.)
1890	196	..	..	196	..	8
1899	596	..	49	478	..	15
1904	913	2	46	743	..	19
1909	1,176	19	36	1,153	..	25
1913	1,305	220	43	1,482	..	..
1914	1,313	315	61	1,567	..	..
1915	1,239	368	55	1,552	..	..
1916	1,315	468	76	1,707	..	..
1917	1,359	559	94	1,824	..	..
1918	1,260	596	97	1,759	..	..
1919	1,375	631	111	1,895	..	..
1920	1,512	730	49	2,193	..	42
1921	1,225	792	17	2,000	..	37
1922	1,448	1,029	26	2,451	..	45
1923	1,485	1,309	16	2,778	..	50
1924	1,481	1,357	17	2,821	2,737	48
1925	1,530	1,448	23	2,955	2,933	51
1926	1,684	1,852	19	3,517	3,307	57
1927	1,486	1,987	12	3,461	3,445	58
1928	1,418	2,156	11	3,563	3,515	59
1929	1,392	2,423	19	3,796	3,780	62
1930	1,282	2,279	10	3,551	3,563	58
1931	1,157	2,065	10	3,212	3,245	52
1932	1,009	1,791	8	2,793	2,840	45
1933	946	1,793	11	2,728	2,690	43
1934	961	2,210	23	3,148	3,058	48
1935	912	2,383	23	3,272	3,300	52
1936	921	2,752	15	3,658	3,650	57
1937	946	3,317	17	4,246	3,830	59
1938	820	2,274	6	3,088	3,458	53
1939	939	2,615	13	3,541	3,550	54
1940	1,013	2,763	15	3,761	3,730	56
1941	1,015	2,982	25	3,972	3,930	59
1942	953	2,921	18	3,856	3,800	56
1943	805	2,637	15	3,427	3,650	54
1944	720	2,491	15	3,196	3,250	47
1945	724	2,669	18	3,375	3,480	50
1946	771	3,490	8	4,253	4,296	61

Note: In per capita consumption during war years no allowance has been made for service personnel temporarily out of the country but included in the total population.

Source: Data for 1890-1909: U.S. Census of Manufacturers.
1913-1946: News Print Service Bureau Reports.

Table 39.

Newsprint Prices

Average Contract Prices for Newsprint Paper per ton of 2000 pounds at New York

	U.S. dollars
1914	$ 43.60
1915	41.78
1916	51.78
1917	63.78
1918	64.30
1919	79.40
1920	112.60
1921	111.35
1922	76.80
1923	81.80
1924	80.80
1925	76.80
1926	70.00
1927	70.00
1928	67.50
1929	62.00
1930	62.00
1931	57.00
1932	48.33
1933	41.25
1934	40.00
1935	40.00
1936	41.00
1937	42.50
1938	50.00
1939	50.00
1940	50.00
1941	50.00
1942	50.00
1943	54.66
1944	58.00
1945	60.25
1946	72.25
1947, first quarter	84.00
1947, second and third quarters	90.00

Source: 1914 to 1922 figures: News Print Service Bureau, N.Y.
1923 to 1947 figures: Newsprint Association of Canada.

Table 40.

Advertising Lineage in Cities of the United States

Millions of agate lines

	23 cities a	52 cities b
1914	663	....
1915	669	....
1916	751	....
1917	770	....
1918	743	....
1919	1028	....
1920	1175	....
1921	1068	....
1922	1113	....
1923	1191	....
1924	1179	....
1925	1237	....
1926	1286	....
1927	1245	....
1928	1238	1802
1929	1298	1897
1930	1109	1654
1931	1011	1465
1932	814	1165
1933	746	1065
1934	811	1179
1935	855	1247
1939	831	1225
1936	929	1380
1937	950	1410
1938	831	1225
1939	843	1243
1940	853	1269
1941	878	1313
1942	831	1242
1943	944	1396
1944	880	1361
1945	899	1391
1946	1169	1730

a: Source: 1914 to 1933 figures taken from The Newsprint Paper Industry, J. R. Guthrie, Harvard University Press, quoting Editor and Publisher. 1934 to 1945 figures from Editor and Publisher International Year Books.

b: News Print Service Bureau figures.

Table 41.
World Newsprint Production

Estimated 000's of short tons

	1939	1946
Canada	2,869	4,143
British Isles	848	330
U.S.A.	939	771
Germany	415	150
France	276	108
Japan	437	83
Finland	519	258
Newfoundland	308	363
Sweden	305	289
Norway	226	121
Russia	200	200
Holland	104	33
Other Europe	256	217
All others	12	54
	7,714	7,120

Source: Newsprint Association of Canada.

Table 42.
Newsprint Consumption by Larger Papers

The following table lists the estimated 1947 newsprint consumption of some of the large newspapers in Canada and the United States.

Canada	Tons
Halifax Herald and Mail	4,400
London Free Press	4,800
Montreal La Presse	17,800
Montreal Star and Montreal Standard	20,000
Ottawa Journal	3,744
Toronto Daily Star	53,269
Toronto Globe & Mail	12,000
Toronto Evening Telegram	18,000
Vancouver Sun	8,870
Winnipeg Free Press	9,800
United States	
Atlanta Constitution	14,318
Boston Post	32,000
Buffalo News	24,000
Chicago News	42,115
Chicago Sun-Times	60,000
Chicago Tribune	176,000
Cincinnati Times-Star	13,000
Cleveland Plain Dealer	30,266
Des Moines Register and Tribune	31,250
Detroit Free Press	32,000
Detroit News	59,100
Detroit Times	40,000
Houston Chronicle	19,000
Los Angeles Times	40,000
Louisville Courier-Journal and Times	25,943
Miami Herald	25,000
Milwaukee Journal	42,000
New York Herald-Tribune	60,000
New York News	258,000
Omaha World-Herald	17,000
Pittsburg Sun-Telegraph	25,500
Portland Oregonian	22,000
Toledo Blade and Times	18,000
Wall Street Journal	3,100
Washington Post	18,000

Source: Editor and Publisher's "Annual Tabulation of Newspaper Mechanical Equipment", 1-11-47.

Table 43.
Operating Ratio Canadian Newsprint Mills

Annual production as a percentage of rated annual capacity

	Per Cent
1925	88.8
1926	97.5
1927	84.3
1928	79.6
1929	84.6
1930	69.6
1931	58.1
1932	49.9
1933	52.3
1934	67.3
1935	70.3
1936	82.9
1937	93.9
1938	62.4
1939	66.8
1940	78.3
1941	78.9
1942	72.2
1943	69.1
1944	68.6
1945	75.8
1946	96.8

Source: Newsprint Association of Canada.

"E" — OTHER PAPER AND PAPERBOARD

Table 44.

Paper Production — All grades except newsprint

Tons	Paper-board (a)	Wrapping	Book and Writing	Tissue	All Other
1920 . .	158,041	77,292	73,196	3,607	27,119
1921 . .	89,120	52,898	53,530	3,879	14,406
1922 . .	113,200	81,793	64,808	5,758	19,892
1923 . .	130,582	84,912	76,789	4,980	40,499
1924 . .	135,252	89,441	67,934	5,716	32,317
1925 . .	144,646	91,417	74,724	7,200	30,195
1926 . .	155,469	97,057	80,403	7,401	36,605
1927 . .	161,497	102,707	75,072	8,849	37,736
1928 . .	193,061	111,667	79,138	10,896	40,044
1929 . .	250,061	91,374	73,502	9,796	47,085
1930 . .	233,217	78,320	69,468	11,245	36,585
1931 . .	202,854	77,194	59,580	11,560	32,985
1932 . .	209,938	69,018	56,781	12,187	23,638
1933 . .	232,190	67,780	60,683	12,331	24,471
1934 . .	280,724	79,779	64,991	10,258	28,791
1935 . .	314,849	82,517	70,350	18,107	29,629
1936 . .	363,778	95,916	74,940	18,661	28,029
1937 . .	422,710	108,734	84,168	23,747	32,116
1938 . .	356,891	90,879	73,834	25,922	32,919
1939 . .	413,687	109,907	90,135	29,706	30,470
1940 . .	500,094	139,716	102,696	34,054	39,053
1941 . .	649,840	162,581	117,444	35,725	39,453
1942 . .	609,175	165,991	121,419	38,322	39,680
1943 . .	568,101	145,545	122,174	43,247	40,835
1944 . .	588,348	156,721	155,498	46,532	57,494
1945 . .	595,131	162,175	162,198	50,418	65,621
1946 . .	683,643	175,369	189,318	56,717	79,913

(a) Includes rigid insulating and other wall board; sheathing; bristol and index; all other boards.

Source: Dominion Bureau of Statistics.

Table 45.

Paper Production — All grades except newsprint

Value	Paperboard (a)	Wrapping	Book and Writing	Tissue	All Other
1920 . .	$12,904,662	$12,161,303	$21,868,807	$1,155,324	$3,067,400
1921 . .	6,225,948	6,634,211	12,550,520	1,232,398	1,126,260
1922 . .	7,000,081	8,219,841	12,560,504	1,154,772	1,353,553
1923 . .	8,480,233	7,666,174	13,582,135	1,791,880	3,250,608
1924 . .	8,228,760	8,027,918	12,605,623	1,024,967	3,155,326
1925 . .	8,378,621	8,130,102	13,145,407	1,385,089	2,852,815
1926 . .	8,825,804	8,552,400	14,765,725	1,468,004	3,505,348
1927 . .	8,985,788	9,607,829	12,916,469	1,646,487	2,787,439
1928 . .	10,656,200	10,424,217	14,008,406	2,047,206	3,022,744
1929 . .	13,539,645	9,725,876	13,636,562	1,845,395	3,441,617
1930 . .	12,193,829	7,880,224	12,261,659	2,035,325	2,752,954
1931 . .	10,225,732	7,479,993	10,154,171	1,990,925	2,359,431
1932 . .	9,621,041	6,289,293	8,687,895	1,961,468	1,773,574
1933 . .	10,598,439	6,441,695	8,927,408	2,168,497	1,594,335
1934 . .	13,351,475	7,740,823	9,681,536	1,654,534	1,652,397
1935 . .	15,051,893	7,956,783	10,440,789	2,031,221	1,835,499
1936 . .	17,531,451	8,761,356	10,866,346	2,085,489	1,895,491
1937 . .	21,719,730	10,237,823	12,620,507	2,734,307	2,148,753
1938 . .	19,288,172	9,069,298	11,098,901	2,961,482	2,181,010
1939 . .	21,359,828	10,712,394	12,773,781	3,060,456	2,011,020
1940 . .	31,078,759	14,457,299	15,518,667	3,709,952	2,624,821
1941 . .	40,214,658	16,744,806	18,476,397	4,199,139	2,889,982
1942 . .	38,641,867	17,221,769	19,181,665	5,036,489	3,113,613
1943 . .	37,528,257	15,614,453	19,047,039	5,637,142	3,246,393
1944 . .	39,091,667	16,699,663	23,700,310	6,391,770	4,007,266
1945 . .	40,100,872	17,558,552	24,468,409	7,065,732	4,620,313
1946 . .	50,213,833	20,797,070	29,995,156	9,015,540	6,125,181

(a) Includes rigid insulating and other wall board; sheathing; bristol and index; all other boards.

Source: Dominion Bureau of Statistics.

Table 46.

Exports of Paper (Except Newsprint)

In the past, the basis and classification upon which exports of paper other than newsprint have been compiled have been modified from time to time. Consequently, only figures covering recent years are included in this and in the succeeding table.

Moreover, because they are compiled on a somewhat different basis, the two tables which follow are not comparable to the production figures in the two preceding tables.

Tons	1946	1945	1944	1943	1942	1941	1940
Wrapping — Coated	2,259	.....	.....	.....	.....	.....	.....
Wrapping — Kraft — n.o.p.	14,270	22,113	17,941	16,275	17,797	24,282	28,878
Wrapping — n.o.p.	5,924	6,983	7,550	6,650	16,306	10,839	12,001
Book	24,676	17,124	17,402	10,193	5,968	5,136	7,728
Bond & Writing	6,175	4,184	3,989	3,893	1,860	2,830	3,029
Paperboard — n.o.p.	59,799	64,643	62,580	44,668	82,227	137,949	85,533
Roofing Paper — all kinds	4,146	3,366	3,088	2,987	2,947	8,557	4,854
Pulp & Fibre Wallboards	14,294	17,914	13,641	13,179	20,671	33,689	28,784
Waste Paper — n.o.p.	10,421	11,260	10,669	7,915	16,922	23,424	11,140
Pulpboard for Wallboards	27,610	29,625	28,147	27,801	23,194	20,303	9,263
Tissue Paper	328	377	709	781	170	2,256	3,315
Toilet Paper	1,878	2,980	2,479*	...	...	...	...
	171,780,	180,569	168,195	134,342	188,062	269,265	194,525

n.o.p.: not otherwise provided for.

* : included in other categories in preceding years.

Source: Dominion Bureau of Statistics.

Also, some of the exports go through a converting plant before shipment. Thus, many of the exports have a value enhanced by the conversion or packaging process, whereas the production figures show the valuation at the basic rate.

Again, the tonnage figures for certain paper products exported are not available. The dollar figures covering these exports will be found in the succeeding table under the heading "Paper Products".

Table 47.

Exports of Paper (Except Newsprint)

(See note accompanying the preceding table)

Value

Paper		1945	1944	1943	1942	1941	1940
Wrapping — Coated	$ 428,117	.....	.....	.....	.....	.....	.....
Wrapping — Kraft — n.o.p.	1,720,167	$ 2,555,522	$ 1,989,604	$ 1,844,688	$ 1,895,633	$ 2,451,549	$ 2,871,283
Wrapping — n.o.p.	941,112	1,215,050	1,267,410	1,017,723	1,508,020	1,086,229	1,324,848
Book	3,580,946	3,062,502	3,012,611	1,558,247	917,884	741,566	1,053,780
Bond & Writing	1,410,794	877,296	778,829	715,927	328,039	500,602	470,786
Paperboard — n.o.p.	5,622,884	5,397,180	5,082,130	3,219,462	5,269,360	8,433,952	6,278,026
Roofing paper — all kinds	330,205	185,831	157,373	157,645	150,004	473,689	251,154
Pulp and Fibre Wallboards	1,234,205	1,438,850	1,181,774	1,050,747	1,479,934	2,528,745	2,145,548
Waste paper — n.o.p.	264,338	255,590	198,150	162,703	332,165	488,745	161,723
Pulpboard for Wallboards	1,562,941	1,621,460	1,402,121	1,350,415	1,104,697	868,776	368,319
Tissue Paper	87,666	78,315	133,424	134,662	32,016	325,340	423,197
Toilet Paper	308,192	502,796	402,573	.....	.....	.....	.....
	$17,491,567	$17,190,392	$15,605,999	$11,212,219	$13,017,752	$17,899,193	$15,348,664
Paper Products							
Bags, Boxes & Cartons	$ 819,430	$ 1,555,349	$ 838,587	$ 909,309	$ 658,743	$ 693,109	628,096
Hanging or Wall	687,149	459,566	311,819	232,785	163,168	153,093	175,082
Hanging not Printed	70,080	.....	.....	.....	.....	1,542	62,906
Writing Paper — n.o.p.	378,821	807,402	625,650	.....	.....	.....	.....
Other Paper	1,285,535	1,376,534	925,593	2,152,398	1,010,435	1,126,920	1,547,827
	$ 3,241,015	$ 4,198,851	$ 2,701,649	$ 3,294,492	$ 1,832,346	$ 1,974,664	$ 2,413,911
Total	$20,732,582	$21,389,243	$18,307,648	$14,506,711	$14,850,098	$19,873,857	$17,762,575

n.o.p. : Not otherwise provided for.

Source: Dominion Bureau of Statistics.

"F" — NATIONAL SIGNIFICANCE

Table 48.

Production and Exports of Paper

	Production		Exports	
	Tons	Value	Tons (a)	Value
1920	1,214,951	$132,022,767	780,932	$ 86,744,010
1921	1,018,947	106,553,935	733,549	75,510,945
1922	1,366,815	106,260,078	994,848	74,825,893
1923	1,589,303	127,984,370	1,178,743	93,770,957
1924	1,718,741	133,319,497	1,263,342	99,248,497
1925	1,884,705	140,160,675	1,442,296	106,624,046
1926	2,266,143	158,182,227	1,770,386	121,414,513
1927	2,468,691	168,230,740	1,918,866	129,637,687
1928	2,849,199	184,305,405	2,252,757	147,156,792
1929	3,197,149	192,989,252	2,563,859	154,919,122
1930	2,926,787	173,305,874	2,372,640	138,530,243
1931	2,611,225	143,629,889	2,042,151	111,114,042
1932	2,290,767	113,873,123	1,805,130	86,323,539
1933	2,419,420	96,689,875	1,871,191	72,396,132
1934	3,069,516	120,892,225	2,454,341	87,633,721
1935	3,280,896	125,752,650	2,617,579	94,041,591
1936	3,806,710	146,354,666	3,061,174	110,861,428
1937	4,345,361	175,885,423	3,532,269	136,164,168
1938	3,249,358	151,650,065	2,545,456	112,872,776
1939	3,600,502	170,776,062	2,795,876	124,127,164
1940	4,319,414	225,836,809	3,489,946	170,879,526
1941	4,524,776	241,450,292	3,587,181	176,184,025
1942	4,231,767	230,269,512	3,241,941	156,938,084
1943	3,966,344	234,036,152	2,983,882	160,825,462
1944	4,044,376	255,545,841	3,012,975	177,290,282
1945	4,359,576	282,837,614	3,285,611	203,011,992
1946	5,347,118	396,956,390	4,045,795	287,437,805

a: Weight of items of export classification for which tonnage figures are available (see note accompanying Table 46). The value figures, however, cover all exports of paper and paper products.

Source: Dominion Bureau of Statistics.

Table 49.

Pulp and Paper Exports and Canadian Trade

	Pulp and paper Exports	Total domestic exports of Canada	Pulp and paper exports to total exports — %	Trade Balance
1919	$97,168,278	$1,235,958,483	7.86	$348,778,322
1920	163,127,988	1,268,014,533	12.86	— 38,758,816
1921	108,644,620	800,149,296	13.58	14,665,274
1922	115,863,742	880,408,645	13.16	131,814,604
1923	140,798,453	1,002,401,467	14.05	112,955,801
1924	139,491,469	1,029,699,449	13.55	234,108,594
1925	154,555,951	1,239,554,207	12.47	361,472,800
1926	173,491,635	1,261,241,525	13.76	268,256,906
1927	176,633,728	1,210,596,998	14.59	143,924,299
1928	192,771,615	1,339,409,562	14.39	141,470,440
1929	198,287,106	1,152,416,330	17.21	— 120,650,245
1930	177,590,222	863,683,761	20.56	— 125,331,731
1931	141,170,685	587,653,440	24.02	— 28,537,926
1932	105,253,603	489,883,112	21.48	45,299,340
1934	113,078,565	649,314,236	17.42	142,836,731
1933	95,750,769	529,449,529	18.09	134,269,478
1935	121,667,321	724,977,459	16.78	187,621,328
1936	142,108,123	937,824,933	15.15	315,318,408
1937	177,979,899	997,366,918	17.84	203,225,455
1938	140,603,514	837,583,917	16.79	171,232,779
1939	155,127,766	924,926,104	16.77	184,866,179
1940	231,809,675	1,178,954,420	19.66	111,266,873
1941	262,081,761	1,621,003,175	16.17	191,662,891
1942	253,104,957	2,363,773,296	10.71	741,224,113
1943	260,838,237	2,971,475,277	8.78	1,266,275,389
1944	278,853,306	3,439,953,165	8.11	1,724,200,415
1945	309,066,903	3,218,330,353	9.60	1,681,649,146
1946	401,458,464	2,312,215,301	17.36	411,886,445

—: Unfavourable balance.

Domestic exports cover exports of Canadian produce. In the last 20 years, domestic exports cover approximately 98 per cent or more of total Canadian exports.

Pulp and paper export figures 1919-1930 estimated by DBS from fiscal year figures.

Source: Dominion Bureau of Statistics.

Table 50.

Pulp and Paper Production and the National Income

	Gross production of industry	National Income
1921	$ 151,003,165	$ 3,507,220,000
1922	158,950,956	3,670,975,000
1923	184,821,511	3,847,059,000
1924	179,259,504	3,865,446,000
1925	193,092,937	4,238,980,000
1926	215,370,274	4,507,335,000
1927	219,329,753	4,738,360,000
1928	233,077,236	5,269,467,000
1929	243,970,761	5,272,619,000
1930	215,970,761	4,452,419,000
1931	174,733,954	3,579,535,000
1932	135,648,729	2,812,905,000
1933	123,415,492	2,722,504,000
1934	152,647,756	3,147,164,000
1935	159,325,546	3,371,254,000
1936	183,632,995	3,827,255,000
1937	226,244,711	4,367,704,000
1938	183,897,503	3,940,000,000
1939	208,152,295	4,221,000,000
1940	298,034,843	5,112,000,000
1941	334,726,175	6,514,000,000
1942	336,697,277	8,277,000,000
1943	344,411,614	9,069,000,000
1944	369,846,086	9,685,000,000
1945	398,805,515	9,587,000,000*
1946	527,814,916	9,212,100,000*

* Preliminary figures.

Source: Dominion Bureau of Statistics. The National Income figures from 1938 onward have been compiled on a revised basis.

Table 51.

Growth of Industry

	Paper and Paper Mills	Total Employees	Total Production
1871	21	760	$ 1,071,651
1881	41	1,588	2,509,993
1891	58	2,817	3,633,257
1901	53	6,236	8,627,557
1911	72	9,766	23,226,479
1921	100	24,619	151,003,165
1931	103	26,669	174,733,954
1941	106	37,154	334,726,175
1945	109	39,996	398,804,515
1946	113	44,967	527,814,916

Source: Dominion Bureau of Statistics.

Table 52.

Operations of Mills

Products	No. of mills 1946
Groundwood pulp	66
Mechanical screenings	24
Soda pulp	1
Bleached sulphite (dissolving)	6
Bleached sulphite (paper pulp)	14
Unbleached sulphite (strong)	12
Unbleached sulphite (news grade)	28
Sulphate pulp, bleached	4
Sulphate pulp, semi-bleached	4
Sulphate pulp, unbleached	11
Chemical screenings	32
Defibrated and exploded pulps	5
Newsprint	35
Groundwood printing and specialy papers	8
Book paper	14
Fine papers	15
Miscellaneous fine papers	13
Tissue paper other than sanitary	12
Sanitary paper	12
Special industrial papers	10
Wrapping papers	20
Building papers	13
Paperboard	36
Building boards	7

Note: Most mills make two or more products. There are in all 113 mills.

Source: Dominion Bureau of Statistics.

Table 53.

Mill Locations

	Pulp Mills	Pulp & Paper Mills	Paper Mills	Total
Nova Scotia	4	1	—	5
New Brunswick	3	3	—	6
Quebec	12	31	7	50
Ontario	9	16	18	43
Manitoba	—	2	—	2
British Columbia	3	3	1	7
Canada	31	56	26	113

Source: Dominion Bureau of Statistics.

Table 54.

Employees and Wages

	Total Employees	Employees On Salary	Total Salaries Paid	Average Salary	Employees On Wages	Total Wages Paid	Average Wage	Wage Index (a)	Cost of Living Index	Total Salaries & Wages
1920	31,298	2,669	$ 6,536,579	$ 2,449	28,629	$38,717,314	$ 1,352	109.5	150.5	$45,253,893
1921	24,611	2,353	6,363,304	2,704	22,258	27,835,786	1,251	101.3	132.5	34,199,090
1922	25,830	2,608	6,326,635	2,426	23,222	26,592,320	1,145	92.7	121.3	32,918,955
1923	29,234	2,820	7,069,196	2,507	26,414	31,313,649	1,185	96.0	121.7	38,382,845
1924	27,627	2,993	6,938,659	2,318	24,634	30,710,869	1,247	101.0	119.5	37,649,528
1925	28,031	2,971	6,816,191	2,294	25,060	31,744,714	1,267	102.6	120.6	38,560,905
1926	31,279	3,099	7,492,040	2,418	28,180	36,683,462	1,302	105.4	121.8	44,175,502
1927	32,876	3,174	8,093,830	2,550	29,702	37,580,463	1,265	102.4	119.9	45,674,293
1928	33,614	3,507	8,713,671	2,485	30,107	38,608,977	1,282	103.8	120.5	47,322,648
1929	34,202	3,738	9,931,901	2,513	30,464	40,822,544	1,368	110.7	121.7	50,214,445
1930	33,207	3,532	9,538,588	2,701	29,675	36,236,388	1,221	98.9	120.8	45,774,976
1931	26,669	3,170	7,858,839	2,479	23,499	26,933,174	1,146	92.8	109.1	34,792,013
1932	24,561	3,112	7,240,125	2,327	21,449	21,108,003	984	79.7	99.0	28,348,128
1933	24,037	2,920	6,464,510	2,252	21,117	20,193,032	956	77.4	94.4	26,657,542
1934	26,993	3,174	7,148,763	2,252	23,819	26,158,280	1,098	88.9	95.6	33,307,043
1935	27,836	3,290	7,827,961	2,379	24,546	28,065,352	1,143	92.6	96.2	35,893,313
1936	33,205	3,372	7,927,690	2,351	26,106	31,512,384	1,207	97.7	98.1	39,440,074
1937	33,205	3,044	9,561,449	2,364	29,161	39,196,346	1,344	108.8	101.2	48,757,795
1938	30,943	4,263	10,823,536	2,539	26,680	31,795,775	1,192	96.5	102.2	42,619,311
1939	31,016	4,382	10,875,243	2,482	26,634	33,862,136	1,271	102.9	101.5	44,737,739
1940	34,719	4,630	11,693,329	2,526	30,089	44,380,483	1,475	119.4	105.6	56,073,812
1941	37,154	4,970	12,924,964	2,600	32,184	50,752,854	1,577	128.1	111.7	63,677,818
1942	38,002	5,071	13,618,478	2,685	32,931	56,037,915	1,701	138.1	117.0	69,656,393
1943	37,020	5,384	14,663,655	2,723	31,636	56,535,767	1,787	145.1	118.4	71,199,422
1944	37,896	5,488	15,617,507	2,846	32,408	60,215,901	1,858	150.9	118.9	75,833,408
1945	39,996	5,981	16,766,154	2,803	34,015	63,696,490	1,873	152.2	119.5	80,462,644
1946	44,967	6,910	20,959,942	3,033	38,057	80,404,646	2,103	170.8	125.6	101,364,636

Seasonable woods labour not included.

a: Canadian Pulp and Paper Association figures based on: 100 equals 1935-39 average. Cost of living index: 100 equals 1935-39 average.

Source: Dominion Bureau of Statistics.

Table 55.

Capital, Employees and Wages

	Capital Employed	Number of Employees	Capital Employed per employee	Total Salaries and Wages
1920	$347,553,333	31,292	$11,105	$45,253,892
1921	379,812,751	24,619	15,428	34,199,090
1922	381,006,324	25,830	14,751	32,918,955
1923	417,611,678	29,234	14,285	38,382,845
1924	459,457,696	27,627	16,631	37,649,528
1925	460,397,772	28,031	16,425	38,560,905
1926	501,184,714	31,279	16,023	44,175,502
1927	579,853,552	32,876	17,638	45,674,293
1928	685,687,459	33,614	20,399	47,322,648
1929	644,773,806	34,202	18,852	50,214,445
1930	703,937,104	33,207	21,198	45,774,976
1931	630,176,540	26,669	24,630	34,792,013
1932	597,550,013	24,561	24,329	28,348,128
1933	559,265,544	24,037	23,267	26,657,542
1934	554,973,891	26,993	20,560	33,307,043
1935	545,572,938	27,836	19,600	35,893,313
1936	536,073,034	29,478	18,186	39,440,074
1937	570,352,287	33,205	17,177	48,757,795
1938	594,908,222	30,943	19,226	42,619,311
1939	597,908,918	31,016	19,277	44,737,379
1940	642,979,942	34,719	18,520	56,073,812
1941	678,937,841	37,154	18,274	63,677,818
1942	655,598,196	38,002	17,251	69,656,393
1943	667,458,143	37,020	18,029	71,199,422
1946a	1,100,000,000 a	44,967	24,462	101,364,636

Seasonal woods labour is not included.

a: Capital employed figures not compiled after 1943 by Dominion Bureau of Statistics. The $1.1 billion is an estimate of The Financial Post, July 12, 1947, based on annual financial reports covering 70 per cent of the capacity of the industry. The estimate was not compiled on the same basis as that employed in the preceding years which, among other items, did not include substantial assets such as timber limits and power developments, nor investments in wholly or partly owned subsidiaries or other enterprises.

Source: Dominion Bureau of Statistics.

Table 56.

Estimated Sums Paid and Numbers Employed 1946

Wages	
Mill workers	$101 million
Woods workers*	94 million
	$195 million
Workers	
Woods workers, mostly seasonal, on manufacturers' limits east of the Rockies	151,000
Woods workers in B.C. mostly permanent	3,000
Woods workers cutting pulpwood for sale to manufacturers	47,000
	201,000
Mill workers, permanent	44,000
	245,000

* Includes an estimated $22 million to the 47,000 woods workers cutting pulpwood for sale to the mills. Includes also those working for contractors cutting pulpwood on pulp and paper company limits. The terms of pulpwood cutting contracts are of an infinite variety ranging from those in which the contractor and his men are company employees to those in which the contractor is a free agent. Some companies cut all the wood required from their own limits.

Source: Woodlands Section, Canadian Pulp and Paper Association.

Table 57.
Growth in Employment and Wages

	1915	1946	% increase
Mill workers	15,300	44,967	194
Wages and salaries paid	$11,000,000	$101,364,636	821

The average wage paid mill workers in 1946 was $2,103 while the average salary was $3,033.

Source: Dominion Bureau of Statistics.

Table 58.
Domestic Trade 1946

	Pulp and Paper	Paper
Gross value of production	$527,814,916	$396,956,390
Exports	401,458,464	284,196,790
For domestic market	$126,356,452	$112,759,600
Per cent of production retained for domestic use	23.9	28.4

Source: Dominion Bureau of Statistics.

Table 59.
Expenditures 1946

Woods and mill wages, estimated	$195 million
Purchases	228
Total	$423 million

Table 60.
Purchases 1946

Transportation†	$ 85,000,000
Chemicals and mill supplies	42,108,628
Fuel	22,838,178
Electricity	23,363,822
Fibre and fibre stock*	8,637,495
Purchased pulpwood**	32,000,000
Foods***	12,000,000
Fodder***	2,000,000
Total purchases more than	227,948,123

† Estimate based on a 1943 expenditure of $70,583,835 by the industry for transportation. In 1946, on the average the industry loaded 550 cars daily with pulp and paper. In addition, average daily carloadings of pulpwood and supplies moving to the mills would not not be far below this figure.

* Does not include purchases of woodpulp by paper mills.

** Estimate. The wage bill of those cutting this wood is included in the estimated $94 million received by woods workers.

*** Estimate.

Table 61.
Purchases of Mill Supplies 1946

Chemicals, minerals, size, glue, dyes, etc.	$ 19,114,677
Pulp stones	488,439
Machine clothing (woollen felts)	4,419,992
Miscellaneous supplies	13,294,939
Mill wrapping and packing material	2,886,110
Wire mesh (fourdrinier & cylinder)	1,904,471
	$ 42,108,628

Source: Dominion Bureau of Statistics.

Table 62.
Fuel Purchases 1946

Quebec	$ 8,723,726
Ontario	7,959,578
British Columbia	2,640,215
New Brunswick, Nova Scotia and Manitoba	3,514,659
	$ 22,838,178

Source: Dominion Bureau of Statistics.

Table 63.
Electricity Purchased 1946

Quebec	$ 16,350,883
Ontario	4,728,866
British Columbia	88,347
New Brunswick, Nova Scotia and Manitoba	2,195,726
	$ 23,363,822

Note: In addition to purchased electricity the pulp and paper mills own hydro-electric plants which furnished 2,163,387,000 kilowatt hours of electricity to the mills in 1946.

Source: Dominion Bureau of Statistics.

Table 64.
Industry Car Loadings

For 52 weeks ending December 29, 1946

Pulp and Paper	199,033
Pulpwood	191,171

This is the equivalent of 550 cars of pulp and paper, and 524 cars of pulpwood every day in the year. It should be noted that pulpwood car loadings include pulpwood for export.

Source: Dominion Bureau of Statistics.

Table 65.
Payrolls and Weekly Earnings in Important Industries 1946

Industry	Average Number of Employees	Average Weekly Payrolls	Average Weekly Earnings
Pulp & Paper	44,236	$ 1,803,668	$ 40.63
Non-ferrous metal products*	41,257	1,471,903	35.64
Chemicals**	41,520	1,451,503	34.96
Meat packing & slaughtering	21,958	710,597	32.35
Shipbuilding	26,076	976,922	37.55
Automobiles & parts	35,150	1,344,199	38.16
Electrical apparatus	42,126	1,399,842	33.20
Crude, rolled and forged iron & steel products	32,583	1,206,515	36.93
Rubber products	20,578	669,424	32.61
Leather products	32,178	811,106	25.48

Note: Pulp and paper payrolls do not include woods workers.

* Includes the manufacture of non-ferrous metal products, as well as the smelting and refining of non-ferrous metals.

** Includes all classes of chemical manufactures.

Source: Dominion Bureau of Statistics.

Table 66.

Power Utilization

000's of k.w.h.

	All manufacturing industries	Mining Industries	Total Mfg. & mining	Pulp & Paper	% of Total Mfg. & Mining
1939	19,430,434	1,761,339	21,191,773	11,084,776	52.3
1940	20,595,914	1,854,204	22,450,118	10,258,138	45.7
1941	23,130,080	2,081,407	25,211,487	9,208,371	36.5
1942	26,996,286	2,010,231	29,006,517	8,695,762	30.0
1943	29,611,339	1,894,917	31,506,256	8,039,026	25.5
1944	28,529,363	2,535,077	31,064,440	8,168,677	29.2
1945	26,348,995	1,968,321	28,317,316	10,854,371	41.2
1946	a	a	a	13,361,133	a

a: Not yet available.

Source: Dominion Bureau of Statistics.

Table 67.

Canadian Exports 1946

Ex gold in millions of dollars

	Value	%
Forest products	$ 625.6	27
Agricultural & vegetable products	578.5	25
Animal & animal products	358.5	16
All others	749.6	32
	$2,312.2	100

Source: Dominion Bureau of Statistics.

Table 68.

Pulp and Paper and Mining 1946

Gross value of pulp and paper production		$527,814,916*
Mineral production of Canada:		
Gold	$103,180,888	
Other metallics	186,523,321	
Coal, gas, peat, petroleum	100,734,412	
Other non-metallics	41,987,203	
Clay products, cement, lime, stone, sand & gravel	61,414,604	$493,850,428

* During the first eight months of 1947, pulp and paper exports amounted to $354,684,307, a rate equivalent to $532,000,000 for the full year. As exports normally account for 75 per cent of the output of the industry, the gross value of pulp and paper production is now running at a rate exceeding $700,000,000 annually.

Source: Dominion Bureau of Statistics.

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